

Serial No.: 09/865,216

Filing Date: 5/24/2001

Attorney Docket No. 100.211US01

Title: IMPROVEMENTS TO DIGITAL SUBSCRIBER LINE SERVICES

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**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of claims:**

1.(Currently Amended) A system for extending the effective distance of digital subscriber line service, the system comprising:

    a central office terminal, the central office terminal including:

        a data interface; and

        a plurality of line units;

    at least one communication link, coupled to one of the plurality of line units, that carries signals using digital subscriber line service, wherein each communication link is a twisted pair;

    at least one remote access multiplexer, coupled to the at least one communication link, wherein the at least one remote access multiplexer includes a plurality of ports that are adapted to provide digital subscriber line service;

    the remote access multiplexer adapted to multiplex signals between the plurality of ports and the at least one communication link; and

    wherein the at least one remote access multiplexer is located at a distance from the central office terminal so as to provide digital subscriber line service to user terminals that are located more than 12 kilofeet from the central office terminal.

2.(Original) The system of claim 1, wherein the central office further includes a telephony interface.

3. (Original) The system of claim 1, wherein the at least one remote access multiplexer is located at a distance from the central office terminal so as to provide digital subscriber line service to user terminals that are located between 12 and 30 kilofeet from the central office terminal.

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4. (Original) The system of claim 1, and further including a splitter at the remote access multiplexer that provides telephony service over the ports of the remote access multiplexer.
5. (Original) The system of claim 1, wherein the at least one communication link provides single high speed digital subscriber line service.
6. (Original) The system of claim 1, wherein the at least one communication link comprises four communication links.
7. (Original) The system of claim 1, wherein the remote access multiplexer is powered over the at least one communication link to support lifeline plain old fashion telephone service.
8. (Original) The system of claim 1, wherein each of the at least one communication links supports up to 8 ports of a corresponding remote access multiplexer.
9. (Original) The system of claim 1, wherein the central office terminal is located at a central office.
10. (Original) The system of claim 1, wherein the central office terminal is subtended from a remote unit of a digital loop carrier.
11. (Original) The system of claim 1, wherein the central office terminal is a digital loop carrier.

Claims 12-27 have been cancelled.

28. (Currently Amended) A system for extending the effective distance of digital subscriber line service, the system comprising:

a central office terminal, the central office terminal including:

a data interface, and

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a plurality of line units;

at least one communication link, coupled to one of the plurality of line units, that carries signals using digital subscriber line service, wherein each communication link is a twisted pair;

at least one remote access multiplexer, coupled to the at least one communication link, wherein the at least one remote access multiplexer includes:

a first port, adapted to be coupled to the at least one communication link,

a plurality of subscriber ports, adapted to be coupled to a plurality of communication links, and

at least one multiplexer unit, coupled to the first port and the plurality of subscriber ports, the multiplexer unit adapted to multiplex signals between the first port and the plurality of subscriber ports; and

wherein the at least one remote access multiplexer is located at a distance from the central office terminal so as to provide digital subscriber line service to user terminals that are located more than 12 kilofeet from the central office terminal.

29. (Original) The system of claim 28, wherein the central office terminal further includes a telephony interface.

30. (Original) The system of claim 28, wherein the at least one remote access multiplexer is located at a distance from the central office terminal so as to provide digital subscriber line service to user terminals that are located between 12 and 30 kilofeet from the central office terminal.

31. (Original) The system of claim 28, and further including a splitter at the remote access multiplexer that provides telephony service over the ports of the remote access multiplexer.

32. (Original) The system of claim 28, wherein the at least one communication link provides single high speed digital subscriber line service.

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33. (Original) The system of claim 28, wherein the at least one communication link comprises four communication links.

34. (Original) The system of claim 28, wherein the remote access multiplexer is powered over the at least one communication link and provides plain old fashion telephone service lifeline support.

35. (Original) The system of claim 28, wherein each of the at least one communication links supports up to 8 ports of a corresponding remote access multiplexer.

36. (Original) The system of claim 28, wherein the central office terminal is located at a central office.

37. (Original) The system of claim 28, wherein the central office terminal is subtended from a remote unit of a digital loop carrier.

38. (Original) The system of claim 28, wherein the central office terminal is a digital loop carrier.

Claims 39-42 have been cancelled.

43. (Currently Amended) A system for extending the effective distance of asymmetric digital subscriber line service, the system comprising:

    a central office terminal, the central office terminal including:

        a data interface;

        a telephony interface; and

        a plurality of line units;

    at least one communication link, coupled to one of the plurality of line units, that carries signals using single pair high speed digital subscriber line service, wherein each communication link is a twisted pair;

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at least one remote access multiplexer, coupled to the at least one communication link, wherein the at least one remote access multiplexer includes a plurality of ports that are adapted to provide asymmetric digital subscriber line service;

the remote access multiplexer adapted to multiplex signals between the plurality of ports and the at least one communication link; and

wherein the at least one remote access multiplexer is located at a distance from the central office terminal so as to provide digital subscriber line service to user terminals that are located more than 12 kilofeet from the central office terminal.

44. (Original) The system of claim 43, wherein the central office terminal is a digital loop carrier.

Claims 45-73 have been cancelled.

74. (New) The system of claim 1, wherein the remote access multiplexer is further adapted to multiplex a plurality of plain old fashion telephone signals and digital subscriber service signals onto each of the at least one communication link.